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Students' Perceptions of School-Based Agricultural Education Through an Initial Early Field Experience

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Early Field Experience, EFE, Preservice, Three-Circle Model, Teacher preparation, photovoice

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Students' Perceptions of School-Based Agricultural Education Through an Initial Early Field Experience

Bryan D. Rank[1] & Scott W. Smalley[2]

Abstract

The purpose of this study was to identify the perception of students enrolled in an initial early field experience (EFE) in relation to the components of the agricultural education model. The students enrolled in the initial field experience were freshmen and sophomore students. The initial field experience course consisted of four face-to-face class meetings and a 12-hour initial field experience observation. Students' photographed their perceptions of each component in the agricultural education model (classroom, SAE, FFA). The coding of reflective captions led to themes in three areas of the agricultural education model: (a) classroom themes were active learning, collaboration and facilities, (b) FFA themes were activities and opportunities, and (c) SAE themes were school based projects, awards/degrees, and the smallest circle. Overall, the EFE students used their photographs and descriptions to describe the learner-centered nature of the program. The EFE students described how the three components of the agricultural education model worked together to help school-based agricultural education (SBAE) students gain knowledge and experience. It is recommended that teacher educators incorporate photovoice in EFE programs to facilitate discussion of the initial perceptions of students.

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Introduction/Conceptual Framework

Preparing agriculture teachers to lead effective school-based agricultural education (SBAE) programs is the responsibility of university agricultural teacher education faculty (Roberts & Dyer, 2004; Myers & Dyer, 2004). As part of the teacher education curriculum, early field experience (EFE) is an integral piece of agricultural teacher education programs that are based in the experiential learning process (Retallick & Miller, 2007a; Smalley & Retallick, 2011; 2012). Smalley and Retallick (2012) state, "Through EFE, preservice teachers have experiences that resemble and model the experiences they will have as teachers" (p. 100).

Kolb (2015) described experiential learning as a process in which knowledge is created through the combination of grasping and transforming experience. This process moves the learner through a cycle of dialectically opposed adaptive learning modes of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 2015). The experiential learning process can be used within SBAE programs. An effective SBAE program is commonly

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conceptualized using the three intersecting circles of a Venn diagram (Talbert, Vaughn, Croom, & Lee, 2014). Talbert et al. (2014) describe these components as contextual; inquiry-based instruction through classroom and laboratory interaction; leadership engagement through FFA; and planned and supervised, experience-based learning through SAE. The experiential learning process can be incorporated into each individual component of the SBAE model, as well as within the total SBAE program (Baker, Robinson, & Kolb, 2012). However, to use experiential learning effectively within their programs, agriculture teachers need to understand the process of experiential learning (Baker et al., 2012; Roberts, 2006). Miller and Wilson (2010) describe incorporating the experiential learning process within agricultural teacher education programs as a means to help preservice teachers' link theory to practice. A combination of coursework, EFE, and student teaching is used to prepare agriculture teachers for the profession (Rank & Retallick, 2016).

An EFE is a preparation process for any student preparing to enter the agricultural teacher education profession. Oftentimes, EFE provides a preservice teacher with the first opportunity to experience a real classroom from a teacher's perspective, and to immerse themselves into a classroom setting. Recent research has shown that EFEs are a vital part of teacher preparation programs that occurs prior to the student teaching experience (Guyton & Byrd, 2000; Retallick & Miller, 2007a; Smalley & Retallick, 2012). An EFE provides a preservice teacher a beginning in their career development (Knowles & Cole, 1996). This career development assists the preservice teacher in becoming a lifelong learner. The learning process begins in EFE, and will better prepare a preservice teacher as a problem-solver, critical thinker, and one who wants to learn more (Knowles & Cole, 1996).

An EFE encourages a preservice teacher to continue in the educational profession and provides a preservice student a true learning experience, which can take place early in a preservice training (NCATE, 2008). A preservice teacher begins thinking as a teacher during an EFE, as well as experiencing the role of a teacher early in their academic career (NCATE, 2008). According to NCATE (2008), the purpose of an EFE is to apply skills and knowledge in various settings appropriate to the level of a student's program. Guyton and Byrd (2000) defined EFE as the range of school experiences that occur prior to student teaching for those students in preservice teacher education. The greatest attribute an EFE can provide a preservice teacher is the opportunity to observe the activities of a practicing teacher (Smalley & Retallick, 2012; Retallick & Miller, 2007).

Educators (Guyton & Byrd, 2000) have not disputed the importance of EFE. Pierce (1996) suggested EFE should take place regularly and earlier throughout preservice training. Early field experiences have provided significant learning experiences for preservice teachers, suggesting the need for the design of authentic classroom experiences (Aiken & Day, 1999). To ensure the effectiveness, early field experiences need to be aligned with the entire teacher preparation program (Little & Robinson, 1997). Retallick and Miller (2007a) concluded that programs have established requirements and specific expectations for EFE. A minimum number of contact hours are required for EFE, as well as a minimum number of lessons planned and taught. Additionally, EFE offerings are driven by internal and external factors including licensure, as well as state and national accreditation. Smalley and Retallick (2012) suggested exploratory EFE could assist with the retention and recruitment of teachers. A study conducted by Baker, Culbertson, Ramsey, and Robinson (2016) focused on how preservice teachers conceived and made meaning of exploratory observations. They found in the study that preservice teachers review their own perceptions, which can reduce anxiety to remain in agricultural education, enhance awareness of school settings, and advance understanding of students.

Five issues have been identified by Hudson, Bergin, and Chayst (1993) as to the effectiveness and impact of EFE: 1) lack of common goal, 2) lack of control, 3) limited learning

due to the lack of experiences the preservice teacher can compare, 4) difference between what is being practiced in the classroom and what is being taught on campus, and 5) limited opportunities. Swortzel (1995) stated agricultural education faculty need to continue to evaluate their programs to see where they are accomplishing their mission in preparing teachers who are prepared to teach.

Learners bring their own unique background and set of experiences, which are used as a framework for understanding (Galbraith, 2004). Prior to enrolling in an agricultural teacher education program, students have diverse previous experiences. Some students may have been FFA members, or conducted an SAE while in a SBAE program and other students may not have any previous SBAE experience. A need exists to identify how preservice students perceive the components of the agricultural education model and how the students existing perceptions are influenced by their initial EFE.

Purpose

The purpose of this study was to identify the perception of students enrolled in an initial early field experience in relation to the components of the agricultural education model. Specific objectives were:

1. Identify themes based on the students' perception of the classroom instruction, FFA, and SAE components of SBAE based on the subject of the picture they chose to represent each component;
2. Identify and describe the meaning students ascribe to each of the components: Classroom, FFA, and SAE.

Methods

A modified photovoice analysis was used as a qualitative research method to investigate the EFE students' perceptions of each component of the SBAE model, while they were engaged in their initial EFE. Photovoice was originally developed as an approach to participatory needs assessment (Wang & Burris, 1997). "Photography provides the medium through which people's visions and voices may surface" (Wang & Burris, 1997, p. 382). Using the photovoice process, participants are able to tell a story from their perspective (Wang & Burris, 1997). "The photovoice process is often valued for its ability to uncover rich descriptive information" (Catalani & Minkler, 2010). Wang and Burris (1997) list the goals of the photovoice method as: "(1) to enable people to record and reflect on their community's strengths and concerns, (2) to promote critical dialogue and knowledge about important issues through large and small group discussions of photographs, and (3) to reach policy makers" (p.369).

The participants in this qualitative study were agricultural teacher education students (n= 10) enrolled in an initial EFE course. This course is the first opportunity for agricultural teacher education students to observe a SBAE classroom as an undergraduate student. The students in the course are typically freshmen and sophomores. Students were informed of the purpose of the study, and were asked to sign an informed consent form. Consent to participate was completely voluntary and students were able to opt out at any time without consequence.

The AgEdS 116 initial EFE course is an academic credit course in agricultural teacher education consisting of four face-to-face class meetings and a 12-hour initial field experience observation. The four face-to-face meetings consisted of two meetings at the beginning of the course designed to facilitate the student's goals and expectations of the initial field experience, as well as provide basic technical information about the course. After the initial two face-to-face

meetings, the students completed a background check and 12 hours of observation in a SBAE program. The final two face-to-face meetings were held the week prior to finals. The purpose of the final two face-to-face meetings was to facilitate reflection to help students make meaning of their experience.

During the initial face-to-face meeting, students were asked to take three photographs during their 12-hour initial field experience. One photo to represent each of the three components of the school-based agricultural education model. As an assignment in the course, students submitted their photos in a threaded discussion within Blackboard Learn accompanied by a 250-word reflection/description of each photo. The EFE students were given specific instructions to obtain permission from the agriculture teacher they were observing prior to taking any photographs. During the final face-to-face meeting of the course, the student's photos were shown to the members of the course in a debriefing session to facilitate discussion and experience sharing. The students used this opportunity to compare and contrast each student's perception of the three components of the SBAE model.

The three photographs and the accompanying reflections/descriptions were coded using open coding. The intent of the researchers was to remain as open as possible when searching for codes that provide descriptive data of the participants' experiences rather than using previous literature or pre-determined themes (Merriam, 2009). Each researcher coded all photographs and descriptions/reflections separately. Following the initial coding, the researchers met to discuss final themes that emerged from the coding process.

Researcher Bracketing

Bracketing is an essential first step in qualitative research practice, strengthening the validity of the study (Merriam, 2009). Bracketing is an opportunity for the researchers to discuss their personal experiences related to the research topic in order to identify any bias (Merriam 2009). As such, it is important to note that both researchers have taught SBAE in public schools, and are currently higher education teachers. One researcher was directly involved as the EFE coordinator and instructor for the AgEdS 116 course. The other researcher was also directly involved with EFE students as the Iowa State University Agricultural Teacher Education Coordinator. Additionally, credibility was enhanced through peer debriefings and independent coder review throughout the study (Guba & Lincoln, 1989).

Findings

Of the preservice teachers who participated in this initial early field based experience course in the fall of 2016 (n=10), the majority of participants were female and college sophomores. As a result of the qualitative analysis, themes emerged from this initial early field experience in relation to the components of the agricultural education model.

Classroom: Active Learning, Collaborations, and Facilities

Photos and descriptions that students submitted to describe the classroom instruction component of the agricultural education model were focused on three themes: *active learning, collaboration,* and *facilities*. The active learning theme included codes that indicated learning was hands-on or based in experience such as projects, inquiry-based methods, and/or problem solving. The collaboration theme emerged based on statements and photographs that indicated cooperative learning, as well as statements about inclusion of all students regardless of background. The final

theme, facilities, emerged from statements and photographs that indicated the arrangement of classrooms and labs.

Active Learning Theme. EFE students described the active learning process taking place in SBAE classrooms, as a hands-on experience with a variety of subjects.

> *This photo (see Figure 1) represents how an ag program can be much more than just the standard desk and lecture setting. It shows how hands on the classroom can be and that the students have a say in what they learn about based on their interests." This student further described her photograph by stating, "The school I did my observation at raises alligators in their greenhouse. This started out as a project from one of their classes and they have continued to raise them and they have even harvested one.*

Another student described her photograph as "*This showcases agriculture education's mission of providing students with inquiry based instruction and learning through interactive classroom activities.*" Additionally, she commented, "*Once the review was complete, students took a safety test that must be passed with 100% in order to begin welding. Then, students could go into the shop and weld.*"

Figure 1.

Figure 2.

Collaboration Theme. In addition to the active learning that was taking place, collaboration was another common theme that emerged from the photographs and comments of the EFE students. One student commented, "*The teachers strongly encouraged the students to work in teams with many of their projects. This encourages teamwork, communication, and cooperation.*" Another student indicated, "*What stuck out to me the most about the [School] agricultural program was how much he encouraged talking. The whole classroom was based upon getting the students involved with one another.*" This student further explained, "[The teacher] *thought that collaborative communication was one of the most important parts of learning.*"

Some students also described collaboration by discussing the inclusion of students from diverse backgrounds in learning activities. One student stated, "[The teacher] *wanted to ensure that*

both rural and urban students understood what was going on. It was about teaching agriculture." Additionally, this student commented that, "*The classes that she taught were educational but made sure that they reached the students on a personal level too.*"

Facilities Theme. The EFE students described the facilities as part of the classroom instruction component of SBAE. One student stated, "*I thought it was cool that they had a lab in the back of the classroom*" when describing his photograph (see Figure 3). Another student commented that in addition to the classroom, "*Many of the classes utilize the greenhouse and shop.*" Students also noticed organization within the facilities. One student observed, "*When I walked into the classroom, I felt a sense of organization.*" This student commented about her photo (see Figure 4), "*If you look closely in the photo, you can see that she has the cabinets labeled and everything is put away and organized.*" She also indicated, "*I really want to have a classroom set up like she did, I was very comfortable to be in and I felt like kids liked it because they knew where everything was.*"

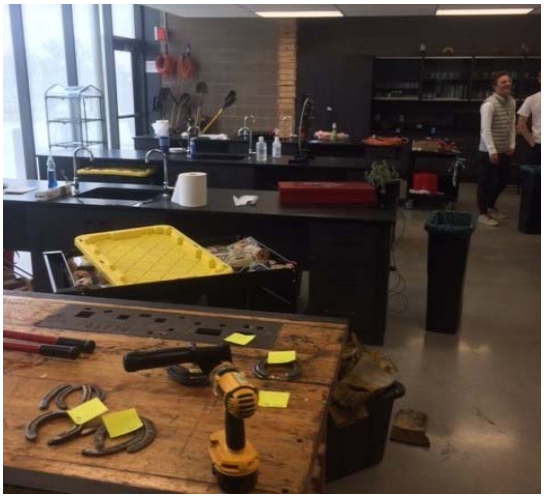

Figure 3

Figure 4.

FFA: Activities and Opportunities

In the area of FFA, two themes emerged from the photovoice, which included *activities* and *opportunities*. The preservice students identified a variety of activities in FFA through their photos.

Activities Theme. The *activities* identified by the preservice students ranged from career development events (CDE's), steak dinners, and beef weigh-ins. One preservice teacher described, *"In this picture, they have a sign up for the contest that the students are planning to do for their leadership career development events in the spring... It honestly warms my heart to see that there are so many freshmen who are signed up for conduct of meetings."*

Another student stated (see Figure 5), "*I took a picture of the white board that was at the front of their classroom. I thought this was a good example of how many activities their chapter had going on in the near future*." Yet another shared, "*This photo represents the Floriculture competition, where center pieces, boutonnieres, bouquets and much more are created by FFA*

members as they compete to make the best possible pieces. CDE's are so incredibly important because they give the students more real world experiences."

Opportunities Theme. Another theme, which emerged from the area of FFA, was *opportunities*. A preservice student stated, *"FFA to me is making the conscious choice to be better than you were yesterday. This involves making good choices and working hard every day. I think the students who are willing to take advantage of opportunities and put in the effort, are going to see a greater reward for their efforts..."* Another student shared (see Figure 6), *"This mural shows the many opportunities that the FFA provides, and the valuable things that can be learning through your years as an FFA member."* Another student shared,

> *FFA to me is all about personal growth and taking the opportunities that are given to you. I believe that each student who has willingly signed up for a contest is taking the next step in maximizing their opportunities. … A lot of what FFA means to me is seen in the creed. FFA to me is making the conscious choice to be a better you than you were yesterday. This involves making good choices and working hard every day. … I think that the students, who are willing to take charge and put in the effort, are going to see a greater reward for their efforts than those who don't.*

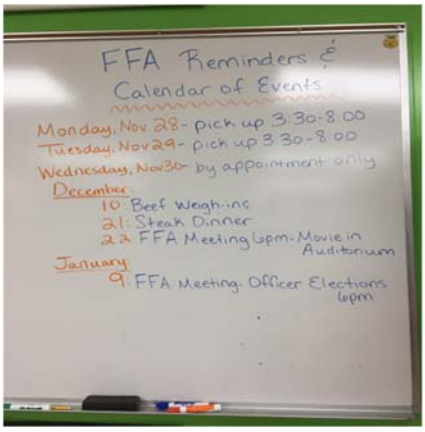

Figure 5

Figure 6.

SAE: School Based Projects, Awards/Degrees, and Smallest Circle

Three themes emerged from the photographs and descriptions of the SAE component submitted by the EFE students, which included: *school-based projects*, *awards and degrees*, and *the smallest circle*.

School-based Projects Theme. The school-based project theme emerged from codes, which indicated that high school students were conducting SAEs at school and using school facilities. Awards and degrees was a theme that emerged from codes that addressed recognition through FFA degrees and awards. The third theme, the smallest circle, emerged from codes that indicated that the SAE component of the agricultural education model was less of a focus in the school they observed than the classroom or FFA components.

EFE students described SAE projects that were conducted at school. One student described their photograph (see Figure 7) as, "*The picture that I attached was a picture of 3 kids who were*

working on a horse head made out of horse shoes." This student suggested, "*Since none of these kids lived in the country they were not able to have animal SAE or do farm work like a lot of kids do. These kids are all putting in the hard work and dedication to this SAE. Even though it might not be a living animal it still takes a lot of work.*"

Figure 7.

Figure 8.

Another student described her photograph (see Figure 8) as "*This is the greenhouse at [High School]. Not an exact representation of a Supervised Agricultural Experience, but it was the best representation that I could think of.*" She said that "*Some of the students at [High School] utilize the greenhouse to accomplish their SAE project.*" In addition to the greenhouse, she observed that "*another student had a welding project he was using as his SAE*."

An aquaculture SAE (see Figure 9) was described by another EFE student. This student described her photograph as, "*a photo of the fish tanks in the aquaculture classroom.*" She continued by stating, "[Teacher] *told me kids could use these tanks to do an SAE and raise their own fish for a SAE project if they wanted to in the future.*"

Figure 9.

Figure 10.

Awards and Degrees Theme. The EFE students described recognition through FFA awards and degrees as part of the SAE component. One student described her photograph (see Figure 10) as the names of past chapter members who have achieved their Iowa Degree or American FFA degree. She commented, "*The wall represents every person on record at our school that has received their Iowa degree or American degree.*" She adds, "*The wall doesn't just represent a degree, but the SAE and hard work put behind to earn that degree. This is definitely the most meaningful photo to me out of all three for this photo voice.*"

Smallest Circle Theme. The EFE students believed that SAEs are an important part of SBAE. However, they commented that it was least utilized component of the agricultural education model. One student stated, "*Supervised Agricultural Experience is, in my opinion, probably the smallest circle.*" This student added, "*I'm a firm believer that although it may be the smallest circle in the realistic version of the Ag Ed model, that there is still a lot that can be learned from supervised agricultural experiences.*" Another student commented, "*I feel that SAEs are the smaller portion of the model that people overlook but to me, they are so important because you take the knowledge and skills from the classroom and FFA and get to apply them in real situations.*" Two other students described SAEs as taking a back burner to other components of an SBAE program. One of these students stated, "*Supervised Agricultural Experiences typically kind of takes a back burner in most programs."* Another student said, "*To me an SAE is one of the most important parts of ag. class, even though it seems to take the back burner in many FFA programs.*"

Although the students described SAE as being less of a focus in the SBAE programs they observed, they insisted that SAE was important and should be promoted. One student commented, "*I think that SAEs need to be pushed more so that students can really understand the importance of them. SAE are just as important as the other two pieces of the model, we just need to inform students better and encourage them to seek one out!*" This student described the importance of SAE as, "*Having an SAE really gives the students the real-world experiences that they need to be successful later in life.*" Another student described the difficulty some SBAE students have with implementing SAE. She commented, "*It can be very difficult for students to be able to work on their supervised agricultural experiences, especially if they have a job and don't have the most amount of time.*" Another student personalized her comment by stating what she would do in the future. She commented, "*As a future teacher, I can encourage SAE interaction by stating the benefits up front in the introductory agriculture class.*" An additional student commented about the importance of the agricultural teacher in promoting SAEs. She stated, "*[Teacher] was very big on making sure every kid had an SAE project to do whether or not it was a large scale project or a small scale project.*"

Discussion, Recommendation & Implications

The focus of the study was to identify the perceptions of preservice students enrolled in an initial early field experience in relation to the components of the agricultural education model. The intent was not to generalize the results to all preservice students, but rather to describe the population of students who took part in this initial EFE. Caution should be taken to not generalize the results to broader populations.

The EFE students in this study valued each of the three components of the agricultural education model. However, these students described the classroom instruction components as the most important part of the model. In their photographs and descriptions of the classroom, the EFE students described learning as an active process facilitated by the agriculture teacher. These EFE students indicated that they observed an environment in the classroom that was learner-centered rather than teacher-centered. One EFE student specifically mentioned that the students were

encouraged to talk to each other while working, indicating a possible social-constructivist premise for the agricultural classroom they observed.

Within the FFA component, the EFE students described the range of activities and opportunities for SBAE students. Within the themes of activities and opportunity, the EFE students were cognizant of how FFA provides an opportunity for learning to extend beyond the classroom. Additionally, the EFE students indicated that they were excited by the possibility of extending these opportunities to their own students once they become agriculture teachers.

SAE was described by the EFE students as the smallest component of the model. Although the EFE students described their personal belief that SAE is a valuable learning experience, they described SAE as being less of a focus in the programs they observed. It should be noted that the EFE students may have had limited exposure to SAE in their 12-hour observation. However, the observation that SAE is not implemented to the same extent as the classroom and FFA components is consistent with research conducted by Retallick (2010) and Wilson & Moore (2007) who found that agricultural teachers can talk conceptually about SAE, but have difficulty implementing it in practice.

EFE students described participating in SAEs at school using school facilities. In their description of the photographs, the EFE students discussed the school-based SAEs they observed as projects designed to help students that may not have the resources to develop a traditional SAE. National Council for Agricultural Education ([NCAE], 2015) has described school-based enterprise as a new SAE type. These school-based SAEs could be modified slightly to fit the NCAE description of the school-based enterprise SAE type. One possible modification could be to create a simulated workplace environment (NCAE, 2015) by requiring students to track their time and make weekly reports to the agriculture teacher that could be modeled after reports given by employees to their supervisor. Both of these recommended modifications may already be practiced as a part of the student's record book. However, if these recommendations were specifically required in addition to the record book as part of a school-based SAE, it would enhance the real-world simulation of a workplace environment.

Overall, the EFE students used their photographs and descriptions to describe the learner-centered nature of the total program. The EFE students described how the three components of the agricultural education model work together to help SBAE students gain knowledge and experience that they can use in their future. The EFE student's emphasized active project-based learning was the focus of the classroom component of the SBAE model, and that the projects extended beyond the classroom through FFA and SAE.

Many of the EFE students alluded to their own goals as teachers in their descriptions. The EFE students expressed a desire to emulate the teachers they observed, and use active project-based learning in their future SBAE programs. Thinking of themselves as a teacher is consistent with the purpose of an EFE. One of the primary purposes of EFE is to facilitate the opportunity for preservice teachers to begin thinking as a teacher early in their teacher education program (NCATE, 2008). The EFE student's desire to use active project-based learning and to extend learning beyond the classroom may help them to implement the experiential learning process within each component of the SBAE model, as well as across the entire model.

Agricultural teacher educators should be aware of the observations and reflections of the EFE students. These observations and reflection will better facilitate a cohesive program of continuing experience that supports the development of skills, which will be necessary to build upon and implement the EFE student's goals. For example, agricultural teacher educators should

model the experiential learning process by using project-based instruction in other teacher education courses to build on the teaching methods observed by preservice teachers in their EFE. The modified photovoice research method could be adapted to become a teaching method, as well as a research method. Using the photovoice approach as a teaching method can help agricultural teacher educators understand the initial perceptions of EFE students, consistent with the original development of photovoice as an approach to participatory needs assessment (Wang & Burris, 1997). Research should be conducted to identify how the use of the modified photovoice method can enhance learning for preservice teachers, as well as how photovoice can be used to inform practice in teacher education programs.

The findings of this study are limited to the perceptions of the study participants. As such, it is recommended that the modified photovoice methodology be replicated in future initial field experience courses. It is also recommended that the modified photovoice methodology be used to identify the perceptions of student teachers and/or early career agriculture teachers. Additionally, comparisons between the perceptions of students in their initial field experience and the perceptions of student teachers and/or early career agriculture teachers could identify any change in the students' perception of the agricultural education model as the preservice teacher's transition from novice to expert.

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